

Abstract of the Disclosure

An integrated circuit with a number of optical waveguides that are formed in high aspect ratio holes. The high aspect ratio holes extend through a semiconductor wafer. The optical waveguides include a highly reflective material that is deposited so as to

5 line an inner surface of the high aspect ratio holes which may be filled with air or a material with an index of refraction that is greater than 1. These metal confined waveguides are used to transmit signals between functional circuits on the semiconductor wafer and functional circuits on the back of the wafer or beneath the wafer.

"Express Mail" mailing label number: EL467Z9212545

Date of Deposit: July 18, 2000
 I hereby certify that this paper or fee is being deposited with the
 United States Postal Service "Express Mail" Post Office to Addressee"
 service under 37 CFR 1.10 on the date indicated above and is
 addressed to the Assistant Commissioner for Patents,
 Washington, D.C. 20231

Printed Name Shawn Hise

Signature [Signature]

09618648-071800